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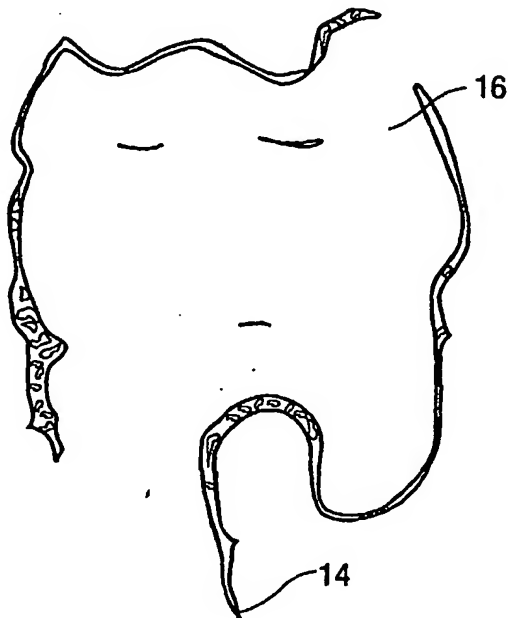
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(54) Title: **AUTOMATED CENTERLINE DETECTION ALGORITHM FOR COLON-LIKE 3D SURFACES**



(57) Abstract: A three dimensional image of the colon like surface is processed to determine at least its ring structure. The image is composed of vertex points, each vertex point having a discrete point identifier and three dimensional position information. The three dimensional position information is averaged in a shrinking procedure to contract the three dimensional image proximate to a major axis of the colon-like surface. Evenly spaced points are taken through the shrunken colon like surface and connected to form a curve. Planes are generated at intervals normal to the curve to split the shrunken colon like surface into image segments. By mapping these image segments back to the original image through their discrete point identifiers, an accurate ring profile of the colon like surface can be generated.

Shrunken 3d surface of the human colon
(Number of iterations = 250)

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